

## Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Kwak EL, Bang Y-J, Camidge DR, et al. Anaplastic lymphoma kinase inhibition in non-small-cell lung cancer. *N Engl J Med* 2010;363:1693-703.

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**Supplemental text:**

ECOG Performance Status: 0 Fully active, able to carry on all pre-disease performance without restriction; 1 Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work; 2 Ambulatory and capable of all selfcare but unable to carry out any work activities. Up and about more than 50% of waking hours.

**RECIST version 1.0 Tumor Assessment Criteria**

At baseline, tumor lesions will be categorized as measurable or non-measurable (defined below).

All baseline evaluations will be performed as close as possible to the first day of study treatment and never more than 4 weeks before starting therapy.

***Measurable Lesions***

- Lesions that can be accurately measured in at least 1 dimension (longest diameter to be recorded) as  $\geq 2.0$  cm with conventional techniques or  $\geq 1.0$  cm with spiral CT scan.
- A tumor lesion that is situated in a previously irradiated area is eligible for measurable disease provided: 1) there has been documented disease progression in this site; 2) the criteria for measurability as outlined above are met; 3) this is not the only site of measurable disease.
- All measurements should be determined using a ruler, calipers or digital technology, and recorded on the CRF in metric notation.

***Nonmeasurable Lesions***

All other lesions, including small lesions (longest diameter  $< 2.0$  cm with conventional techniques or  $< 1.0$  cm with spiral CT) and truly nonmeasurable lesions. Truly nonmeasurable lesions include bone lesions, leptomeningeal disease, ascites, pleural or pericardial effusion, inflammatory breast disease, lymphangitis cutis or pulmonis, abdominal masses that are not confirmed and followed by imaging techniques, and cystic lesions.

***Documentation of Target and Nontarget Lesions***

All measurable lesions up to a maximum of 5 lesions per organ and 10 lesions in total, representative of all involved organs, should be identified as target lesions and measured and recorded at baseline. Target lesions (measurable) should be selected on the basis of their size (lesions with the longest diameter) and their suitability for accurate repetitive measurements (either by imaging techniques or clinically). A sum of the longest diameter (LD) for all target lesions will be calculated and reported as the baseline sum LD. The baseline sum LD will be used as reference by which to characterize the objective tumor response.

All other lesions (or sites of disease) should be identified as nontarget lesions and should also be recorded at baseline. Measurements are not required, and these lesions should be followed as present or absent.

### *Techniques for Assessing Measurable Disease*

The same method of assessment and the same technique should be used to characterize each identified and reported lesion at screening and during follow-up. Imaging-based evaluation is preferred to evaluation by clinical (physical) examination when both methods have been used to assess the antitumor effect of a treatment.

Accepted methods of tumor assessment include:

**Clinical examination:** clinically detected lesions will only be considered measurable when they are superficial (eg, skin nodules and palpable lymph nodes). For the case of skin lesions, documentation by color photography including a ruler to estimate the size of the lesion is recommended.

**Chest x-ray:** lesions on chest x-ray are acceptable as measurable lesions when they are clearly defined and surrounded by aerated lung. However, CT is preferable.

**CT and MRI:** CT and MRI are the best currently available and most reproducible methods of measuring target lesions selected for response assessment. Conventional CT and MRI should be performed with contiguous cuts of 10 mm or less in slice thickness. Spiral CT should be performed using a 5 mm contiguous reconstruction algorithm.

**Ultrasound:** should not be used to measure tumor lesions for objective response evaluation. It is however a possible alternative to clinical measurements of superficial palpable nodes, subcutaneous lesions and non-small cell lung nodules. US might also be useful to confirm the complete disappearance of superficial lesions usually assessed by clinical examination.

**Endoscopy and Laparoscopy:** The utilization of these techniques for objective tumor evaluation has not yet been fully or widely validated. Utilization of such techniques for objective tumor response should be restricted to validation purposes in specialized centers. However, such techniques can be useful in confirming complete histopathologic response when biopsy specimens are obtained.

**Tumor markers:** tumor markers alone cannot be used to assess response. If markers are initially above the upper normal limit, they must normalize for a patient to be considered a complete clinical response.

**Cytology and histology:** the cytological confirmation of the neoplastic origin of any effusion that appears or worsens during treatment when the measurable tumor has met criteria for response or stable disease is mandatory to differentiate between response or stable disease (an effusion may be a side effect of the treatment) and progressive disease.

### *Response Criteria*

The following RECIST criteria will be the primary method utilized in this study for the assessment and reporting of tumor response data.

**Complete Response (CR):** Disappearance of all target and nontarget lesions, normalization of tumor marker levels, and no appearance of new lesions indicates complete response. Each of these must be documented on 2 occasions separated by at least 4 weeks.

**Partial Response (PR):** At least a 30% decrease in the sum of the LDs of target lesions (taking as reference the baseline sum), without progression of nontarget lesions and no appearance of new lesions indicates partial response. Each of these must be documented on 2 occasions separated by at least 4 weeks.

**Stable Disease (SD):** Neither PR or PD criteria are met.

**Progressive Disease (PD):**  $\geq 20\%$  increase in the sum of the LD of target lesions taking as references the smallest sum LD recorded since the treatment started, unequivocal progression of existing nontarget lesions, or the appearance of 1 or more new lesions. The occurrence of a pleural effusion or ascites is also considered PD if substantiated by cytologic investigation and not previously documented. Pathologic fracture or collapse of bone is not necessarily evidence of disease progression; however, new bone lesions not previously documented are considered PD.

In cases where procedures used to assess tumor size suggest tumor necrosis or intratumor bleeding coincident with an increase in size, a PET scan or ultrasound should be considered because it is important to be sure that increasing lesions are due to increased tumor growth and not necrosis or bleeding.

### *Determination of Best Overall Response:*

The best overall response is the best response recorded from the start of treatment until disease progression/recurrence. For PD, taking as reference the smallest measurements recorded since treatment started. For CR and PR the best response assignment will depend on the achievement of both measurement and confirmation (at the minimum of 28 days) criteria. Stable disease rate will be defined as the percentage of patients with stable disease based on the total number of patients evaluable for response.

| <b>Determination of Best Overall Response</b> |                   |             |                  |
|---|-------------------|-------------|------------------|
| Target Lesions                                | Nontarget Lesions | New Lesions | Overall Response |
| CR <sup>a</sup>                               | CR                | No          | CR               |
| CR  | Non-CR/Non-PD     | No          | PR               |
| PR <sup>b</sup>                               | Non-PD            | No          | PR               |
| SD <sup>c</sup>                               | Non-PD            | No          | SD               |
| PD <sup>d</sup>                               | Any               | Yes or No   | PD               |
| Any   | PD                | Yes or No   | PD               |
| Any   | Any               | Yes         | PD               |

<sup>a</sup> Complete response.  
<sup>b</sup> Partial response.  
<sup>c</sup> Stable disease.  
<sup>d</sup> Progressive disease.

**Reverse transcriptase polymerase chain reaction to determine EML4-ALK breakpoints:**

RNA was extracted using the Agencourt Formapure method (Agencourt Biosciences, Beverly, MA), and reverse transcribed with using Superscript III cDNA synthesis kit (Invitrogen, Carlsbad, CA). A common primer to exon 20 of *ALK* was used along with primers to exons 6,13, and 18 of *EML4* in order to determine EML4-ALK breakpoints. *ALK* exon 20 reverse primer: (TGTCTAACTCGGGAGACTATGAAA). *EML4* forward primers: exon 6 (CCTTCAACACCCAAATTAATACC), exon 13 (TATGGAGCAAACTACTGTAGAGC), exon 18 (CACACAGACGGGAATGAACA). PCR amplifications were performed in an Eppendorf Mastercycler Gradient (Eppendorf, Hamburg, Germany). PCR was conducted in a total volume of 20 µl containing 1X Platinum Taq PCR buffer, 200 µM dNTPs, 2.0 mM MgCl<sub>2</sub>, 0.4 µM primers, 1.0 U of Platinum Taq polymerase (Invitrogen, Carlsbad, CA) with 40 ng of cDNA, using the following conditions: initial denaturation at 94°C for 5 min, followed by 40 cycles of denaturation at 94°C for 30 seconds, annealing at 55°C for 30 seconds, and primer extension at 72°C for 1 minute and 30 seconds. Breakpoints were confirmed by Sanger sequencing of RT-PCR products, using the Big-Dye 1.1 sequencing kit (Life Technologies/Applied Biosystems, Foster City, CA).

**Immunohistochemistry (IHC):** was performed on FFPE specimens using the BenchMark XT automated tissue staining system (Ventana Medical Systems, Inc., Tucson, AZ) using validated protocols. Briefly, slides were deparaffinized and endogenous peroxidase activity was blocked by incubation with 3% H<sub>2</sub>O<sub>2</sub>. Heat-induced antigen retrieval was performed using the Ventana CC1 mild reagent (Ventana Medical Systems), a combination of ethylenediaminetetraacetic acid (EDTA) and boric acid in Tris buffer, and the process was carried out for 30-60 minutes. After treatment with 10% normal goat serum to block nonspecific protein binding, a primary rabbit monoclonal antibody against

ALK (Cell Signaling, Danvers, MA) was applied, followed by incubation with horseradish peroxidase-conjugated multimer antibody reagent (Igs; Ventana Medical Systems). The antigen-antibody reaction was visualized using diaminobenzidine as chromogen (UltraView, Ventana Medical Systems). Finally the slides were lightly counterstained with hematoxylin. Slides were evaluated for intensity (0 no staining; 1+ light staining; 2+ moderate staining; 3+ strong staining) and distribution of ALK immunostaining. Any IHC intensity greater than 0 is defined as IHC positive.



**Supplemental Figure 1.**

Schematic diagram of *EML4* and *ALK* genes, as well as representative fusion variants (listed by *EML4* exon breakpoints). Multiple breakpoints within a given exon have been reported, for instance exons 2a and 2b, and 6a and 6b (14,15). Encoded EML4 domains: CC=coiled coil; HELP=hydrophobic echinoderm microtubule-associated protein-like domain; WD= WD repeats. Encoded ALK domains: TM=transmembrane; Kinase=intracellular tyrosine kinase; Exon 20 breakpoint (dashed line).

**Supplemental Figure 2.**

Panels A,B,C: <sup>18</sup>FDG-PET, CT, and merged image, respectively, prior to initiation of crizotinib.

Panels D,E,F: <sup>18</sup>FDG-PET, CT, and merged image after 2 cycles of therapy.

**Supplemental Figure 3.**

Panels A,B,C: <sup>18</sup>FLT-PET, CT, and merged image, respectively, prior to initiation of crizotinib.

Panels D,E,F: <sup>18</sup>FDG-PET, CT, and merged image after 1 cycle of therapy.

**Supplemental Table 1**

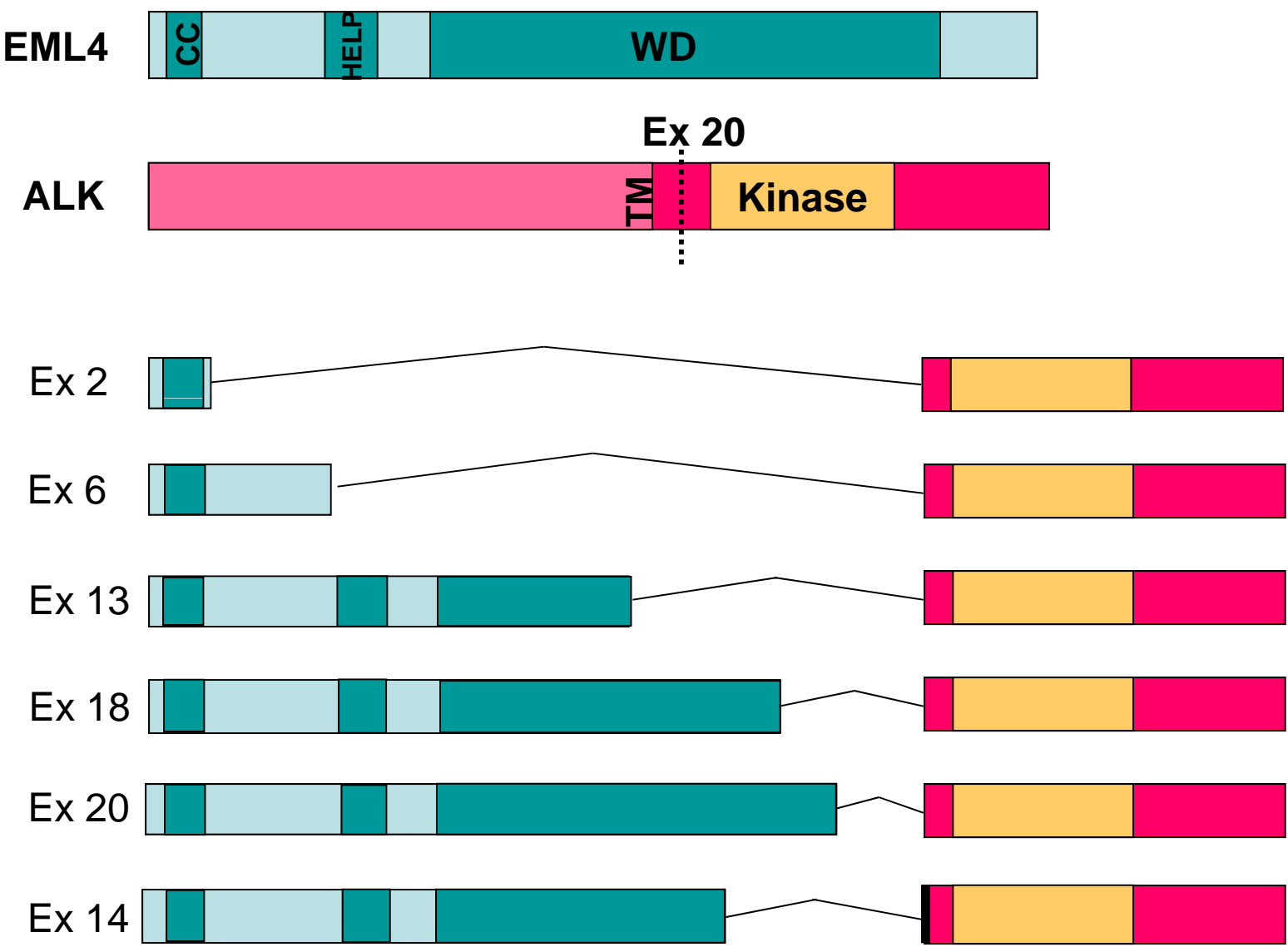
By World Health Organization (WHO) tumor classification criteria, the adenocarcinoma histologic subtype was solid with mucin in 48% of cases and mixed-type in 38% of cases.

WHO histologic classification of NSCLC for *ALK* FISH-positive patients treated with crizotinib, listed by subject number as per Figure 2A. The percentage of signet ring cells is listed as >10%, <10% or 0. Other findings included several cases with numerous cells with dense eosinophilic cytoplasm, a feature not included in the WHO classification or in prior studies of *ALK*-positive NSCLC. \*Adenocarcinoma diagnosis by report, slides not available (NA) for review to determine subtype.

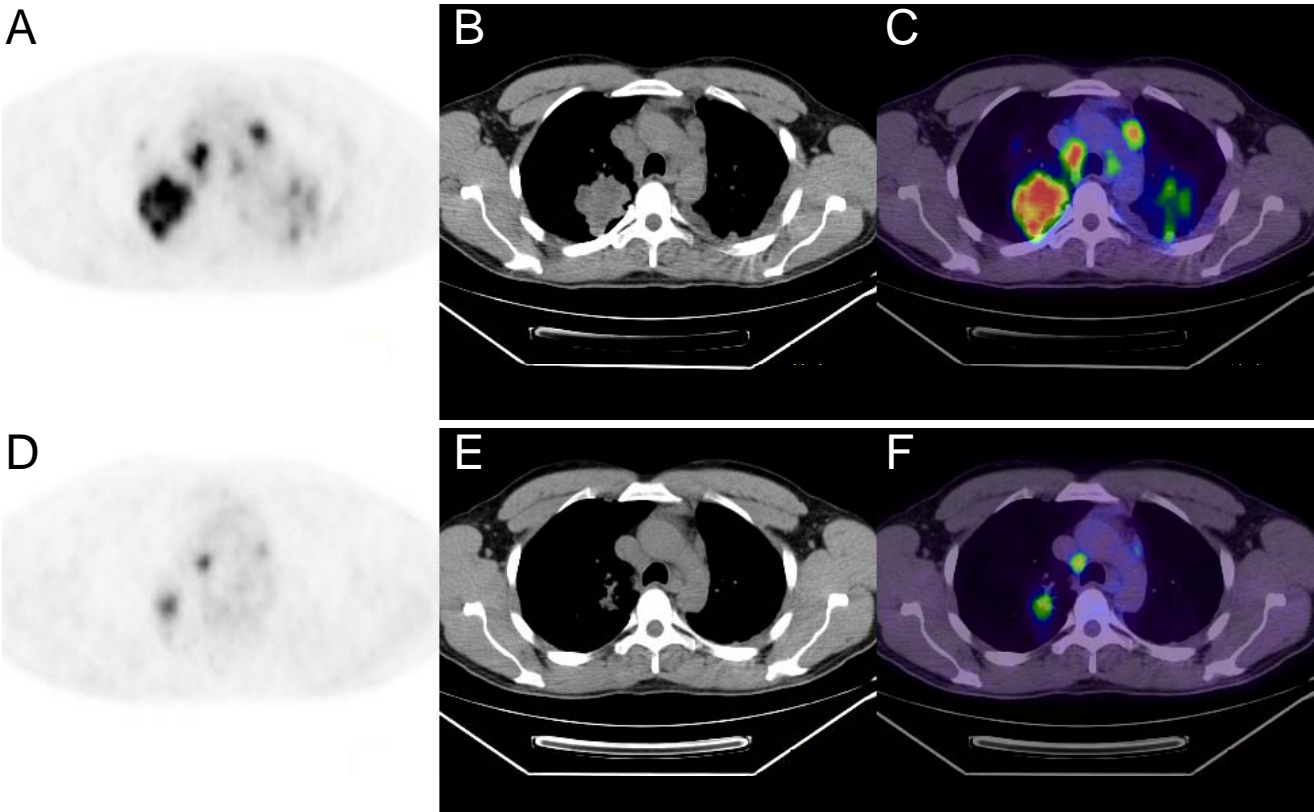
**Supplemental Table 2:**

Prior treatment history for 82 patients receiving crizotinib, listed by subject number as per Figure 2A. Prior treatment status was not available in the database for 1 patient.

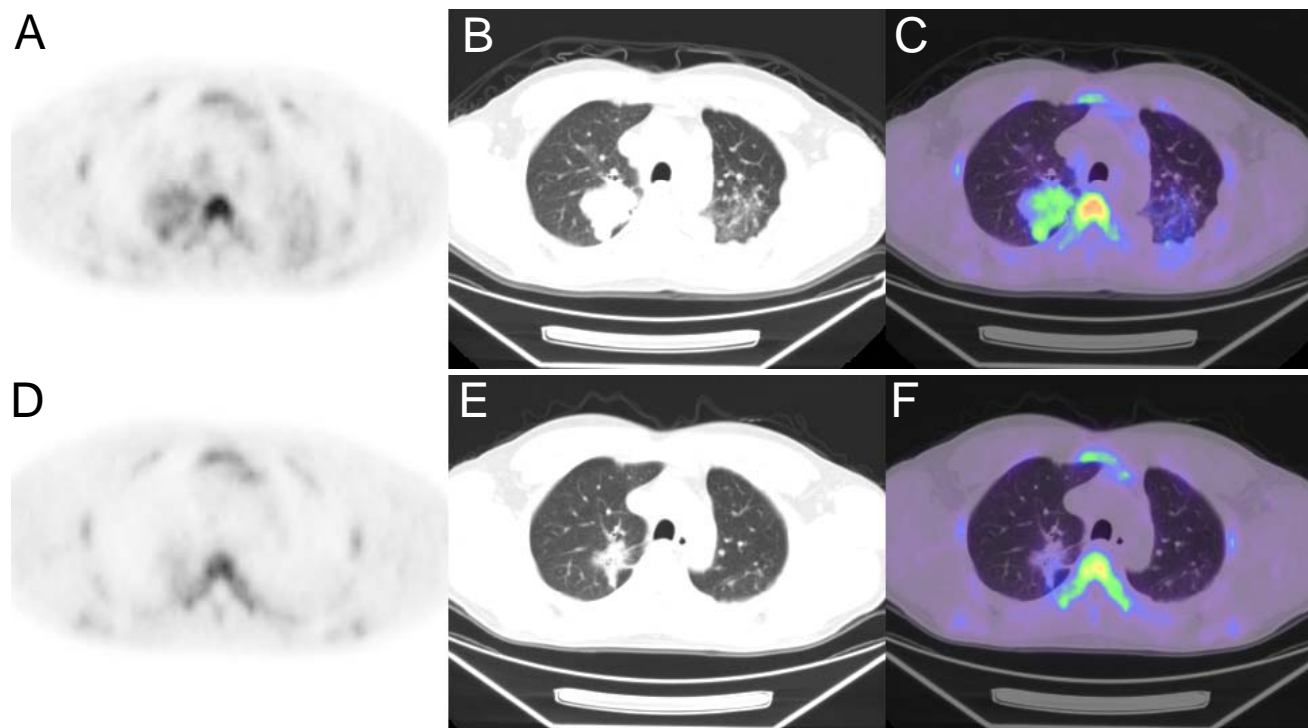
Supplemental Figure 1



Supplemental Figure 2



Supplemental Figure 3



Supplemental Table 1

| Subject # | Histology                               | Subtype   | Signet ring cells | Other findings               |
|-----------|---|---|-------------------|------------------------------|
| 1         | Adenocarcinoma                          | Solid with mucin  | <10%              |                              |
| 4         | Adenocarcinoma/ squamous cell carcinoma | Solid with mucin (squamous histology sections not available for review) | <10%              |                              |
| 7         | Adenocarcinoma*                         | NA  |                   |                              |
| 16        | Adenocarcinoma*                         | NA  |                   |                              |
| 19        | Adenocarcinoma                          | Solid with mucin  | >10%              |                              |
| 21        | Adenocarcinoma                          | Solid with mucin  | >10%              |                              |
| 23        | Adenocarcinoma*                         | NA  |                   |                              |
| 25        | Adenocarcinoma                          | BAC, mucinous   | 0                 |                              |
| 27        | Adenocarcinoma                          | Mixed, solid (90%), acinar (10%)  | 0                 | Dense eosinophilic cytoplasm |
| 28        | Adenocarcinoma*                         | NA  |                   |                              |
| 29        | Adenocarcinoma                          | Solid with mucin  | >10%              |                              |
| 37        | Adenocarcinoma                          | Solid with mucin  | <10%              |                              |
| 38        | Adenocarcinoma                          | Solid with mucin  | >10%              |                              |
| 42        | Adenocarcinoma                          | Mixed, 90% BAC (non-mucinous), 10% solid with mucin                     | >10%              |                              |
| 43        | Adenocarcinoma                          | Solid with mucin  | >10%              |                              |
| 45        | Adenocarcinoma                          | Acinar  | <10%              |                              |
| 51        | Adenocarcinoma                          | Mixed, 70% solid with mucin, 30% acinar                                 | >10%              |                              |
| 52        | Adenocarcinoma                          | Solid with mucin  | <10%              | Dense eosinophilic cytoplasm |
| 53        | Adenocarcinoma                          | Mixed, 90% solid with mucin, 10% papillary                              | 0                 | Dense eosinophilic cytoplasm |
| 56        | Adenocarcinoma                          | Mixed, 90% solid with mucin, 10% acinar                                 | <10%              | Dense eosinophilic cytoplasm |
| 58        | Adenocarcinoma                          | Mixed, 80% solid with mucin, 20% acinar                                 | >10%              |                              |
| 59        | Adenocarcinoma                          | Solid with mucin  | >10%              |                              |
| 61        | Adenocarcinoma                          | BAC, mucinous   | <10%              |                              |
| 63        | Adenocarcinoma*                         | NA  |                   |                              |
| 66        | Adenocarcinoma*                         | NA  |                   |                              |
| 67        | Adenocarcinoma                          | Mixed, solid with mucin 80%, acinar 20%                                 | <10%              | Dense eosinophilic cytoplasm |
| 68        | Adenocarcinoma                          | Mixed, acinar 60%, solid with mucin 20%, papillary 20%                  | <10%              |                              |
| 75        | Adenocarcinoma                          | Mixed, BAC (80%), acinar (20%)  | <10%              |                              |
| 79        | Adenocarcinoma                          | Solid with mucin  | <10%              | Dense eosinophilic cytoplasm |

Supplemental Table 2

| Subject # | Regimen Number | Agent                          | Duration of treatment |
|-----------|----------------|--------------------------------|-----------------------|
| 1         | 1              | INVESTIGATIONAL AGENT (XL-647) | 168                   |
| 2         | 1              | CISPLATIN                      | 296                   |
| 2         | 1              | GEMCITABINE                    | 296                   |
| 2         | 2              | PEMETREXED                     | 283                   |
| 2         | 2              | ERLOTINIB                      | 283                   |
| 2         | 3              | RETASPIMYCIN                   | 30                    |
| 2         | 3              | PACLITAXEL                     | 30                    |
| 2         | 4              | DOCETAXEL                      | 63                    |
| 2         | 5              | BEVACIZUMAB                    | 105                   |
| 2         | 5              | PEMETREXED                     | 105                   |
| 3         | 1              | CISPLATIN                      | 110                   |
| 3         | 1              | PEMETREXED                     | 110                   |
| 3         | 2              | PEMETREXED                     | 44                    |
| 3         | 3              | AFLIBERCEPT OR PLACEBO         | 21                    |
| 3         | 3              | DOCETAXEL                      | 21                    |
| 3         | 4              | BEVACIZUMAB                    | 0                     |
| 3         | 4              | GEMCITABINE                    | 7                     |
| 4         | 1              | CISPLATIN                      | 25                    |
| 4         | 1              | CETUXIMAB                      | 32                    |
| 4         | 1              | VINORELBINE                    | 32                    |
| 5         | 1              | BEVACIZUMAB                    | 219                   |
| 5         | 1              | CARBOPLATIN                    | 128                   |
| 5         | 1              | PACLITAXEL                     | 107                   |
| 5         | 2              | PEMETREXED                     | 22                    |
| 5         | 2              | CETUXIMAB                      | 22                    |
| 6         | 1              | BEVACIZUMAB                    | 0                     |
| 6         | 1              | CARBOPLATIN                    | 108                   |
| 6         | 1              | GEMCITABINE                    | 96                    |
| 6         | 1              | PACLITAXEL                     | 108                   |
| 7         | 1              | PEMETREXED                     | 122                   |
| 7         | 1              | CISPLATIN                      | 122                   |
| 7         | 2              | ERLOTINIB                      | 14                    |
| 7         | 3              | PEMETREXED                     | 20                    |
| 8         | 1              | BEVACIZUMAB                    | 91                    |
| 8         | 1              | CARBOPLATIN                    | 91                    |
| 8         | 1              | PACLITAXEL                     | 91                    |
| 8         | 2              | BEVACIZUMAB                    | 139                   |
| 8         | 2              | ERLOTINIB                      | 139                   |
| 8         | 3              | PEMETREXED                     | 335                   |
| 8         | 3              | BEVACIZUMAB                    | 335                   |
| 9         | 0              |                                |                       |
| 10        | 1              | PEMETREXED                     | 62                    |
| 10        | 1              | CISPLATIN                      | 62                    |
| 11        | 1              | CARBOPLATIN                    | 22                    |
| 11        | 1              | DOCETAXEL                      | 22                    |
| 11        | 2              | ERLOTINIB                      | 6                     |
| 11        | 3              | PEMETREXED                     | 107                   |
| 11        | 3              | CARBOPLATIN                    | 107                   |

Supplemental Table 2

|    |              |                                    |     |
|----|--------------|------------------------------------|-----|
| 11 | 4            | PEMETREXED                         | 224 |
| 11 | 5            | DOCETAXEL                          | 104 |
| 11 | 6            | ERLOTINIB                          | 88  |
| 11 | 7            | CISPLATIN                          | 7   |
| 11 | 7            | GEMCITABINE                        | 7   |
| 12 | 1            | PEMETREXED                         | 105 |
| 12 | 1            | BEVACIZUMAB                        | 105 |
| 12 | 1            | CARBOPLATIN                        | 105 |
| 13 | 1            | CARBOPLATIN                        | 66  |
| 13 | 1            | PACLITAXEL                         | 66  |
| 13 | 2            | GEMCITABINE                        | 196 |
| 13 | 2            | VINORELBINE                        | 196 |
| 14 | 1            | CARBOPLATIN                        | 31  |
| 14 | 1            | PACLITAXEL                         | 31  |
| 14 | 1            | THALIDOMIDE                        | 31  |
| 14 | 2            | GEFITINIB                          | 534 |
| 14 | 3            | INVESTIGATIONAL AGENT: PF-00299804 | NA  |
| 14 | 4            | ERLOTINIB                          | 0   |
| 15 | Not reported |                                    |     |
| 16 | 1            | ERLOTINIB                          | 35  |
| 16 | 2            | GEMCITABINE                        | 42  |
| 16 | 3            | BEVACIZUMAB                        | 151 |
| 16 | 3            | CARBOPLATIN                        | 126 |
| 16 | 3            | PACLITAXEL                         | 126 |
| 16 | 4            | PEMETREXED                         | 203 |
| 16 | 5            | BEVACIZUMAB (MAINTENANCE)          | 344 |
| 17 | 1            | CARBOPLATIN                        | 63  |
| 17 | 1            | PACLITAXEL                         | 63  |
| 17 | 2            | PEMETREXED                         | 88  |
| 17 | 2            | CARBOPLATIN                        | 88  |
| 18 | 1            | CARBOPLATIN                        | 20  |
| 18 | 1            | GEMCITABINE                        | 20  |
| 18 | 2            | BEVACIZUMAB                        | 211 |
| 18 | 3            | ERLOTINIB                          | 272 |
| 19 | 1            | ERLOTINIB                          | 64  |
| 20 | 1            | BEVACIZUMAB                        | 39  |
| 20 | 1            | PACLITAXEL                         | 39  |
| 20 | 1            | PEMETREXED                         | 39  |
| 21 | 1            | CISPLATIN                          | 92  |
| 21 | 1            | GEMCITABINE                        | 99  |
| 21 | 2            | ERLOTINIB                          | 36  |
| 22 | 1            | CISPLATIN                          | 20  |
| 22 | 1            | PEMETREXED                         | 20  |
| 22 | 2            | CISPLATIN                          | 40  |
| 22 | 2            | ETOPOSIDE                          | 40  |
| 23 | 1            | PEMETREXED                         | 0   |
| 23 | 1            | CARBOPLATIN                        | NA  |
| 23 | 1            | GEMCITABINE                        | 60  |

Supplemental Table 2

|    |   |                                 |     |
|----|---|---------------------------------|-----|
| 23 | 1 | ERLOTINIB                       | 235 |
| 24 | 1 | ERLOTINIB                       | 122 |
| 24 | 2 | CARBOPLATIN                     | 120 |
| 24 | 2 | PEMETREXED                      | 120 |
| 24 | 3 | DOCETAXEL                       | NA  |
| 24 | 4 | ZOLEDRONIC ACID                 | NA  |
| 25 | 1 | PEMETREXED                      | 157 |
| 25 | 1 | CISPLATIN                       | 157 |
| 26 | 0 |                                 |     |
| 27 | 0 |                                 |     |
| 28 | 1 | BEVACIZUMAB                     | 144 |
| 28 | 1 | CARBOPLATIN                     | 122 |
| 28 | 1 | PACLITAXEL                      | 122 |
| 29 | 1 | CISPLATIN                       | 35  |
| 29 | 1 | VINDESINE                       | 35  |
| 29 | 2 | CARBOPLATIN                     | 45  |
| 29 | 2 | PACLITAXEL                      | 45  |
| 29 | 3 | PAMIDRONATE                     | 25  |
| 29 | 3 | RENIN-ANGIOTENSIN SYSTEM AGENTS | 25  |
| 30 | 1 | BEVACIZUMAB                     | 476 |
| 30 | 1 | CARBOPLATIN                     | 84  |
| 30 | 1 | PACLITAXEL                      | 84  |
| 31 | 1 | CARBOPLATIN                     | 0   |
| 31 | 1 | GEMCITABINE                     | 0   |
| 31 | 2 | GEFITINIB                       | 0   |
| 32 | 1 | BEVACIZUMAB                     | 85  |
| 32 | 1 | CARBOPLATIN                     | 85  |
| 32 | 1 | PACLITAXEL                      | 85  |
| 32 | 2 | VINORELBINE                     | 74  |
| 33 | 1 | CARBOPLATIN                     | 0   |
| 33 | 1 | PACLITAXEL                      | 0   |
| 33 | 2 | ERLOTINIB                       | 121 |
| 33 | 3 | PEMETREXED                      | 427 |
| 34 | 1 | CISPLATIN                       | 7   |
| 34 | 1 | VINORELBINE                     | 7   |
| 35 | 1 | CARBOPLATIN/PACLITAXEL          | 63  |
| 36 | 1 | CISPLATIN                       | 40  |
| 36 | 1 | VINORELBINE                     | 40  |
| 37 | 1 | CARBOPLATIN                     | 30  |
| 37 | 1 | GEMCITABINE                     | 30  |
| 37 | 2 | PEMETREXED                      | 245 |
| 38 | 1 | BEVACIZUMAB                     | NA  |
| 38 | 1 | CARBOPLATIN                     | NA  |
| 38 | 1 | PACLITAXEL                      | NA  |
| 39 | 1 | INVESTIGATIONAL AGENT           | NA  |
| 39 | 2 | BEVACIZUMAB                     | 104 |
| 39 | 2 | ERLOTINIB                       | NA  |
| 39 | 3 | CARBOPLATIN                     | 68  |
| 39 | 3 | PACLITAXEL                      | 68  |
| 39 | 4 | PEMETREXED                      | 86  |



Supplemental Table 2

|    |   |                            |     |
|----|---|----------------------------|-----|
| 39 | 5 | ERLOTINIB                  | 29  |
| 39 | 6 | SUNITINIB                  | 105 |
| 39 | 7 | GEMCITABINE                | 0   |
| 40 | 1 | CISPLATIN                  | 126 |
| 40 | 1 | ERLOTINIB                  | 126 |
| 40 | 1 | PEMETREXED                 | 126 |
| 40 | 2 | ERLOTINIB                  | 141 |
| 40 | 2 | PEMETREXED                 | 141 |
| 41 | 1 | PEMETREXED                 | 93  |
| 41 | 1 | CARBOPLATIN                | 63  |
| 41 | 2 | LOW DOSE CHEMOTHERAPY- IPT | 10  |
| 42 | 1 | CARBOPLATIN                | 212 |
| 42 | 1 | GEMCITABINE                | 212 |
| 42 | 2 | VANDETANIB                 | 31  |
| 42 | 3 | PEMETREXED                 | 61  |
| 42 | 4 | CARBOPLATIN                | 275 |
| 42 | 4 | VINORELBINE                | 275 |
| 42 | 5 | ERLOTINIB                  | 122 |
| 42 | 6 | DOCETAXEL                  | 126 |
| 43 | 1 | CISPLATIN                  | 68  |
| 43 | 1 | GEMCITABINE                | 68  |
| 43 | 2 | DOCETAXEL                  | 23  |
| 43 | 3 | PEMETREXED                 | 21  |
| 44 | 1 | CISPLATIN                  | 198 |
| 44 | 1 | PACLITAXEL                 | 198 |
| 44 | 2 | GEMCITABINE                | 28  |
| 44 | 2 | VINORELBINE                | 28  |
| 44 | 3 | GEFITINIB                  | 121 |
| 44 | 4 | CISPLATIN                  | 200 |
| 44 | 4 | DOCETAXEL                  | 200 |
| 44 | 5 | PEMETREXED                 | 572 |
| 45 | 1 | BEVACIZUMAB                | 143 |
| 45 | 1 | BORTEZOMIB                 | 143 |
| 45 | 1 | CARBOPLATIN                | 143 |
| 45 | 2 | BEVACIZUMAB                | 151 |
| 45 | 3 | PEMETREXED                 | 18  |
| 45 | 4 | BEVACIZUMAB                | 91  |
| 45 | 4 | ERLOTINIB                  | 73  |
| 46 | 1 | CARBOPLATIN                | 69  |
| 46 | 1 | PACLITAXEL                 | 69  |
| 47 | 1 | CARBOPLATIN                | 30  |
| 47 | 1 | GEMCITABINE                | 30  |
| 47 | 2 | DOCETAXEL                  | 156 |
| 48 | 1 | CISPLATIN                  | 108 |
| 48 | 1 | DOCETAXEL                  | 108 |
| 48 | 1 | ERLOTINIB                  | 36  |
| 48 | 2 | BEVACIZUMAB                | 243 |
| 48 | 2 | PEMETREXED                 | 364 |
| 48 | 3 | GEMCITABINE                | 74  |
| 48 | 3 | VINORELBINE                | 29  |

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|    |   |                      |     |
|----|---|----------------------|-----|
| 48 | 4 | CARBOPLATIN          | 98  |
| 48 | 4 | CETUXIMAB            | 98  |
| 48 | 4 | PACLITAXEL           | 98  |
| 48 | 5 | ERLOTINIB            | 38  |
| 48 | 6 | SUNITINIB            | 0   |
| 49 | 1 | CISPLATIN            | 24  |
| 49 | 1 | PACLITAXEL           | 24  |
| 49 | 2 | CARBOPLATIN          | 71  |
| 49 | 2 | PACLITAXEL           | 71  |
| 49 | 3 | ERLOTINIB            | 59  |
| 49 | 4 | PEMETREXED           | 122 |
| 49 | 5 | GEMCITABINE          | 138 |
| 49 | 6 | VINORELBINE          | 56  |
| 49 | 7 | DOCETAXEL            | 124 |
| 50 | 1 | CARBOPLATIN          | 62  |
| 50 | 1 | PACLITAXEL           | 62  |
| 51 | 1 | CARBOPLATIN          | 23  |
| 51 | 1 | GEMCITABINE          | 28  |
| 51 | 2 | ERLOTINIB            | 71  |
| 51 | 3 | CARBOPLATIN          | 20  |
| 51 | 3 | PEMETREXED           | 90  |
| 52 | 1 | GEFITINIB            | 19  |
| 52 | 2 | CISPLATIN            | 31  |
| 52 | 2 | TS-1                 | 31  |
| 52 | 3 | ERLOTINIB            | 168 |
| 52 | 4 | DOCETAXEL            | 0   |
| 53 | 1 | CARBOPLATIN          | 70  |
| 53 | 1 | CISPLATIN            | 35  |
| 53 | 1 | GEMCITABINE          | 147 |
| 53 | 2 | VANDETANIB + PLACEBO | 392 |
| 54 | 0 |                      |     |
| 55 | 1 | CARBOPLATIN          | 68  |
| 55 | 1 | PACLITAXEL           | 68  |
| 55 | 2 | CISPLATIN            | 77  |
| 55 | 2 | GEMCITABINE          | 77  |
| 55 | 3 | ERLOTINIB            | 38  |
| 55 | 4 | PEMETREXED           | 100 |
| 55 | 5 | VINORELBINE          | 154 |
| 56 | 1 | CISPLATIN            | 21  |
| 56 | 1 | VINORELBINE          | 28  |
| 56 | 2 | CARBOPLATIN          | 81  |
| 56 | 2 | PACLITAXEL           | 81  |
| 56 | 3 | CISPLATIN            | 15  |
| 56 | 3 | GEMCITABINE          | 15  |
| 57 | 1 | CISPLATIN            | 21  |
| 57 | 1 | GEMCITABINE          | 21  |
| 58 | 1 | CARBOPLATIN          | NA  |
| 58 | 1 | PACLITAXEL           | NA  |
| 59 | 1 | ERLOTINIB            | 29  |
| 59 | 2 | CARBOPLATIN          | 118 |

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|    |   |             |     |
|----|---|-------------|-----|
| 59 | 2 | PACLITAXEL  | 118 |
| 60 | 1 | CARBOPLATIN | 66  |
| 60 | 1 | GEMCITABINE | 66  |
| 60 | 2 | ERLOTINIB   | 748 |
| 60 | 3 | PF-00299804 | 256 |
| 60 | 4 | ERLOTINIB   | 82  |
| 61 | 1 | CISPLATIN   | 63  |
| 61 | 1 | TAXOTERE    | 63  |
| 61 | 2 | ERLOTINIB   | 60  |
| 62 | 1 | CARBOPLATIN | 66  |
| 62 | 1 | PACLITAXEL  | 66  |
| 62 | 2 | GEFITINIB   | 31  |
| 62 | 3 | PEMETREXED  | 112 |
| 62 | 4 | GEMCITABINE | 133 |
| 63 | 1 | CARBOPLATIN | 144 |
| 63 | 1 | GEMCITABINE | 144 |
| 64 | 1 | BEVACIZUMAB | NA  |
| 64 | 1 | CARBOPLATIN | NA  |
| 64 | 1 | PACLITAXEL  | NA  |
| 65 | 0 |             | NA  |
| 66 | 1 | CARBOPLATIN | 51  |
| 66 | 1 | PACLITAXEL  | 51  |
| 66 | 2 | CARBOPLATIN | 140 |
| 66 | 2 | PACLITAXEL  | 140 |
| 66 | 3 | CISPLATIN   | 49  |
| 66 | 3 | ETOPOSIDE   | 49  |
| 66 | 4 | DOCETAXEL   | 4   |
| 66 | 5 | GEFITINIB   | 380 |
| 66 | 6 | PEMETREXED  | 63  |
| 66 | 6 | BEVACIZUMAB | 63  |
| 66 | 7 | BEVACIZUMAB | 350 |
| 67 | 1 | CISPLATIN   | 76  |
| 67 | 1 | GEMCITABINE | 76  |
| 67 | 2 | CISPLATIN   | 61  |
| 67 | 2 | DOCETAXEL   | 61  |
| 67 | 3 | CISPLATIN   | 76  |
| 67 | 3 | TS-1        | 76  |
| 68 | 1 | CISPLATIN   | 26  |
| 68 | 1 | GEMCITABINE | 26  |
| 68 | 2 | DOCETAXEL   | 122 |
| 68 | 3 | GEFITINIB   | 0   |
| 68 | 4 | IFOSFAMIDE  | 137 |
| 68 | 4 | MESNA       | 137 |
| 68 | 4 | VINORELBINE | 137 |
| 68 | 5 | CARBOPLATIN | 130 |
| 68 | 5 | PACLITAXEL  | 130 |
| 68 | 6 | PEMETREXED  | 277 |
| 68 | 7 | IRINOTECAN  | 48  |
| 69 | 1 | CARBOPLATIN | 112 |
| 69 | 1 | VINORELBINE | 112 |

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|    |   |                      |     |
|----|---|----------------------|-----|
| 70 | 1 | CISPLATIN            | 43  |
| 70 | 1 | VINORELBINE          | 43  |
| 70 | 2 | CARBOPLATIN          | 0   |
| 70 | 2 | PACLITAXEL           | 0   |
| 71 | 1 | CARBOPLATIN          | 63  |
| 71 | 1 | PACLITAXEL           | 63  |
| 72 | 1 | CISPLATIN            | 141 |
| 72 | 1 | GEMCITABIN           | 141 |
| 72 | 2 | GEFITINIB            | 14  |
| 72 | 3 | PEMETREXED           | 108 |
| 72 | 4 | VINORELBINE          | 161 |
| 73 | 1 | CARBOPLATIN          | 28  |
| 73 | 1 | PACLITAXEL           | 28  |
| 74 | 1 | CARBOPLATIN          | 69  |
| 74 | 1 | PACLITAXEL           | 69  |
| 74 | 2 | ERLOTINIB OR PLACEBO | 340 |
| 74 | 3 | CISPLATIN            | 21  |
| 74 | 3 | GEMCITABINE          | 21  |
| 74 | 4 | GEFITINIB            | 210 |
| 75 | 1 | CISPLATIN            | 113 |
| 75 | 1 | VINORELBINE          | 113 |
| 76 | 1 | BEVACIZUMAB          | 21  |
| 76 | 1 | CARBOPLATIN          | 65  |
| 76 | 1 | PACLITAXEL           | 65  |
| 76 | 2 | BEVACIZUMAB          | 92  |
| 76 | 2 | ERLOTINIB            | 92  |
| 76 | 3 | PEMETREXED           | 63  |
| 76 | 3 | SUNITINIB            | 63  |
| 76 | 4 | PEMETREXED           | 246 |
| 76 | 4 | SUNITINIB            | 350 |
| 77 | 1 | CARBOPLATIN          | 67  |
| 77 | 1 | PACLITAXEL           | 67  |
| 77 | 2 | ERLOTINIB            | 112 |
| 77 | 3 | PEMETREXED           | 40  |
| 78 | 1 | BEVACIZUMAB          | 63  |
| 78 | 1 | CARBOPLATIN          | 63  |
| 78 | 1 | PACLITAXEL           | 63  |
| 78 | 2 | ERLOTINIB            | 277 |
| 78 | 3 | PEMETREXED           | 63  |
| 79 | 1 | CISPLATIN            | 152 |
| 79 | 1 | VINORELBINE          | 152 |
| 79 | 2 | CISPLATIN            | 138 |
| 79 | 2 | PACLITAXEL           | 138 |
| 79 | 3 | GEFITINIB            | 61  |
| 79 | 4 | GEMCITABINE          | 140 |
| 79 | 4 | VINORELBINE          | 142 |
| 79 | 5 | PEMETREXED           | 511 |
| 80 | 1 | CETUXIMAB            | 127 |
| 80 | 1 | CISPLATIN            | 113 |
| 80 | 1 | VINORELBINE          | 120 |

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|    |   |                      |     |
|----|---|----------------------|-----|
| 81 | 1 | GEFITINIB OR PLACEBO | 58  |
| 81 | 2 | CARBOPLATIN          | 63  |
| 81 | 2 | CISPLATIN            | 63  |
| 81 | 2 | PACLITAXEL           | 63  |
| 81 | 3 | CARBOPLATIN          | 112 |
| 81 | 3 | CISPLATIN            | 112 |
| 81 | 3 | GEMCITABINE          | 112 |
| 81 | 4 | ERLOTINIB            | 30  |
| 82 | 1 | CARBOPLATIN          | 42  |
| 82 | 1 | GEMCITABINE          | 49  |

\* NA: Not available